

RISE-1

NEXT-GENERATION REMOTE INITIATION SYSTEM

RISE-1 is a smart long range explosive initiation system designed for various military applications



LONG RANGE

25 km initiation range in line of sight zone. Retransmitter can be used to increase initiation range or reach non-line of sight points.



OVERCOMING DIFFICULT TERRAIN WITH SIGNAL RETRANSMISSION

The signal can be easily amplified by using an extra retransmitter or drone repeater, ensuring that the initiator is always within reach and can be activated as needed.



ENHANCED EW RESISTANCE WITH NON-STANDARD FREQUENCIES

The non-standard frequency range, passive design and signal modulation allows to effectively fight against various EW solutions and ensure reliable battlefield performance.



LONG LASTING BATTERY

High battery capacity of the initiator – up to 140 days @ 20°C in standby mode, resistance to heat, cold and humidity enables the equipment to be used for long term operations such as zone control missions.

Safety Features

- Protection against static charge accumulation
- Initiator lock function
- Safe time delay
- Additional confirmation required before detonation

Security Features

- Encrypted communication to prevent inadvertent initiation
- Chirp based communication, high bandwidth and low chirp spread factor
- Increased resistance to interference and radio signal jamming
- Protection against hacking and firmware extraction from microcontrollers
- Password protected access
- Code protected initiator pairing

System Composition

CONTROLLER

Provides a simple and user-friendly control interface



BLASTER

Controls up to 4 initiators and transmits commands over a long-distance secure network



RETRANSMITTERS

Retransmit commands and signals between controller and initiators over a long-distance secure network



INITIATORS

Initiate connected detonators and return status data



COMPACT
RETRANSMITTER



CONTROLLERS



INITIATORS



RETRANSMITTER

In standby mode, transmitters, retransmitters and initiators are passive and do not emit any signal. Small data packet with minimal footprint are sent only when the system is being tested/goes into arm mode.




RISE-1 System
Specifications

Effective line of sight range	25 km (can be increased with repeater)
Security	Chirp based communication, high bandwidth, low chirp spread factor
Communication	AES-256 (Military-Grade Encryption)
Operating temperature	From -20°C (NATO STANAG 4370 C0) to +49°C (NATO STANAG 4370 C1)
Storage temperature	From -32°C to +49°C (NATO STANAG 4370 C1)
Color of the housing	Olive Green (RAL6003)
NATO Stock Number (NSN)	1375-47-001-1447
Water/dust resistance	IP67 (LST EN 60529)
3 safety levels detonation	- Detonation is not allowed for 60 seconds after the Initiator is turned on - Arm mode must be on before initiating detonation - Confirmation is requested before detonation
Functions	- Lock – defuses and locks capacitor when changing batteries, changing initiator location, defusing detonator or friendly troops movement nearby - Multiple controllers can connect to a single initiator - Group detonation – single initiation can detonate a group of initiators

Controller Application

(RISE-1 APP)

Specifications

Controller operating system	Android OS
Number of paired Initiators	Up to 50 pcs
Number of paired Transmitters	1 pc
Number of paired Repeaters	Up to 10 pcs
Functions	Group detonation, setting delay timer for initiation, Initiator name editing, Initiator Lock mode
Status data is provided	Received signal strength, signal noise ratio, battery status, detonation chain status
NATO Stock Number (NSN)	7030-47-001-1448


Initiator

(RISE-1 RX)

Specifications

Initiation power / voltage	1.68 Joule / 15 Volts
Dimensions	136x40x67mm
Weight	265g
Battery run time in standby mode	Up to 140 days @ 20°C
Battery run time in armed mode	Up to 40 days @ 20°C
NATO Stock Number (NSN)	1375-47-001-1449


Compact Initiator

(RISE-1 cRX)

Specifications

Initiation power / voltage	0.5 Joule / 15 Volts
Dimensions	107x38x44mm
Weight	124g
Battery run time in standby mode	Up to 200 hours @ 20°C
Battery run time in armed mode	Up to 100 hours @ 20°C



**cRX can optionally be equipped with an integrated impact sensor for impact initiation operations.*

Retransmitter

(RISE-1 RTX)

Specifications

Dimensions	112x31x67mm
Weight	215g
Battery run time	Up to 40 days @ 20°C
NATO Stock Number (NSN)	5820-47-001-1450


Compact Retransmitter

(RISE-1 cRTX)

Specifications

Dimensions	67x76x28mm
Weight	92g
Battery run time in Repeater mode	Up to 7 days @ 20°C
Battery run time in Retransmitter mode	Up to 5 days @ 20°C


Blaster

(RISE-1 BTX)

Specifications

Dimensions	140x32x67mm
Weight	246g
Number of paired Initiators	4
Functions	Testing, arming, detonation
Battery run time	Up to 70 days @ 20°C
NATO Stock Number (NSN)	5820-47-001-2090


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